1 /					A	172-	11-893
Form 3160-3 (August 2007) HOPPS A HOPS A HOPPS A HOPPS A HOPPS A HOPPS A HOPPS A HOPPS A HOPPS A HOPPS A HOPPS A HOPPS A HOPPS A HOPPS A HOPPS A HOPPS A HOPPS A HOPPS A HOPPS A HO	OCD-H	IOBBS HOBBS O	CD	OMB	APPROVE to. 1004-013 July 31, 201	7	
HOBE UNITED STATES		100000	<i>40</i>	5. Lease Serial No.			
BUREAU OF LAND MAN		MAR 2 2 2	012	NM27508			
MAR APPLICATION FOR PERMIT TO			.012	6. If Indian, Alloted	e or Tribe	Name	
la. Type of work:	ER	RECEIVE	D	7. If Unit or CA Age			
Ib. Type of Well: X Oil Well Gas Well Other	Si	ngle Zone 🗍 Multip	ole Zone	8. Lease Name and Wilder Federa		239	1347 4H
2. Name of Operator				9. API Well No.			<u> </u>
ConocoPhillips Company	く2	178177		30-00	25-	40	502
3a. Address 3300 N "A" St, Bldg 6 Midland, TX 79705		(include area code)		10. Field and Pool, or WC-025 Red Hills; Bo	Explorato	5 50	263202
4. Location of Well (Report location clearly and in accordance with an		88-6913		11. Sec., T. R. M. or	ne Sprin Blk and Si	Igs) (<u>Joper</u> She
At surface UL D, Sec 28, T 26S, R 32E, 330 FNI				Sec 28, T 26S		ivey of fi	licu
At proposed prod. zone UL M, Sec 28, T 265, K 32E, 550 FM							
14. Distance in miles and direction from nearest town or post office*	<u></u>	5501WL		12. County or Parish		13. Stat	te
19 miles north east of Orla, TX				Lea		NM	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 330 FSL	16. No. of a 640	cres in lease	ng Unit dedicated to this	well			
18. Distance from proposed location*	19. Proposed	1 Depth	20. BLM	BIA Bond No. on file			
to nearest well, drilling, completed, 1214 West applied for, on this lease, ft. of Wilder	-	1D 9322' TVD	, ES008	5			
21. Elevations (Show whether DF, KDB, RT, GL, etc.) $28 \#3$	22. Approxi	nate date work will star	rt*	23. Estimated duration	on		
3153.3' Gr	·	07/23/2012 44					
	24. Attac	chments					
The following, completed in accordance with the requirements of Onshor	re Oil and Gas	Order No.1, must be at	ttached to th	iis form:			~
 Well plat certified by a registered surveyor. A Drilling Plan. 		4. Bond to cover the ltem 20 above).	ne operatio	ons unless covered by an	existing l	oond on f	ile (see
3. A Surface Use Plan (if the location is on National Forest System SUPO must be filed with the appropriate Forest Service Office).	Lands, the	 Operator certific Such other site BLM. 		ormation and/or plans a	s may be r	equired b	y the
25. Signature 7 - N	Name	(Printed/Typed)			Date		
<u>s-hii</u>	Bria	n D Maiorino			12/02	/2011	
Title 7							
Regulatory Specialist	Name	(Duinted/Truned)			Data		
Approved by (Signature) James A. Amas		(Printed/Typed)			MAR	21	2012
Title FIELD MANAGER	Office	CARLSBAD FI					,
Application approval does not warrant or certify that the applicant hold conduct operations thereon. Conditions of approval, if any, are attached.	s legal or equi	able title to those right	ts in the sul	oject lease which would APPROVAL F	entitle the a	applicant WO Y	EARS
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a cr States any false, fictitious or fraudulent statements or representations as	ime for any pa to any matter w	erson knowingly and w ithin its jurisdiction.	villfully to r	nake to any department	or agency	of the Ur	nited

(Continued on page 2)

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K2 03/23/12

Carlsbad Controlled Water Basin

Approval Subject to General Requirements & Special Stipulations Attached SEE ATTACHED FOR CONDITIONS OF APPROVAL MAR 2 6 2012

*(Instructions on page 2)

OPERATORS NAME:

LEASE NAME AND WELL NO.: SURFACE LOCATION: BHL: FIELD NAME: POOL NAME: COUNTY:

ConocoPhillips Company	Conoco	Philli	ps Coi	npany
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330 FNL & 330 FWL 330 FSL & 330 FWL Red Hills	· · · ·
Red Hills	
Bone Spring	
Lea County, New Mexico	

The following information is to supplement the Application for Permit to Drill.

DRILLING PLAN

1. Name and estimated tops of all geologic groups, formations, members, or zones.

	Quaternary	Surface	Water
	Rustler	780	Salt
	Castile	2498	Salt
	Delaware Top	4417	Oil/gas/water
	Ford Sand	4443	Oil/gas/water
	Olds	4448	Oil/gas/water
	Cherry Canyon Lower Top	6545	Oil/gas/water
	Bone Spring	8334	Oil/gas/water
	Bone Spring 1 st carbonate	8558	Oil/gas/water
	top		_
	Bone Spring 1 st carbonate	8630	Oil/gas/water
	base		-
	KOP	8600	
	Avalon A shale Top	8816	Oil/gas/water
	Avalon A shale base	8998	Oil/gas/water
	Avalon B zone top	8998	Oil/gas/water
	Avalon B zone base	9194	Oil/gas/water
	Avalon C shale top	9194	Oil/gas/water
\bigcirc	Avalon C Shale Base	9458	Oil/gas/water
		<i>(</i>)	·
1	DAANHOLIC	9322' (13675 MD)	
	a Million and and		

2. Estimated depths and thickness of formations, members or zones potentially containing usable water, oil, gas, or prospectively valuable deposits of other minerals that the operator expects to encounter, and the operator's plans for protecting such resources.

Quanternary		780 (water	•)
Rustler		2498 (Salt)	
Castile		4417 (Salt))
1 11 0.1 1	•	1 1.0	

All of the water bearing and salt formations identified above will be protected by the intermediate setting of the 9-5/8" casing and circulating of cement to surface

Bone Spring8558-9458 (gas & gas/oil)The geologic tops identified above from the Bone Spring/Avalon are part of the target
formation.

3. The operator's minimum specifications for blowout prevention equipment and diverter systems to be used, including size, pressure rating, configuration, and the testing procedure and frequency.

as a 3M system

A 5000# system will be installed, used, maintained, and tested accordingly. After nippling up, and every 30 days thereafter, preventors will be pressure tested. BOP will be inspected and operated at least daily to insure good working order. All pressure and operating tests will be recorded on the daily drilling reports. Ram Type preventors will be tested to rated working pressure. Annular type preventer(s) shall be tested to 50% of the approved BOP stack working pressure. Pressure shall be maintained at least 10 minutes or until provisions of test are met, whichever is longer. ConocoPhillips Company request a variance to the testing as follows: The 13 3/8 surface casing will be set at a depth of 850' and a Wood Group Pressure Control SH2 type wellhead will be installed on the 13 3/8" casing string. The SH2 type wellhead is a "multi-bowl" type wellhead system that allows the landing of multiple casing strings without having to remove the BOP to install additional wellhead components. This specific wellhead design consists of a 13 3/8" SOW x 13 5/8" 3M psi lower flange assembly with a 13 5/8" x 5M psi upper flange assembly. For the initial installation on the 13 3/8" surface casing, the maximum pressure application to the wellhead system is limited by the 3M psi flange rating. Once installed, the 3M psi wellhead flange will be isolated and all subsequent BOPe pressure testing can be performed to 5000 psi, consistent with the requirements of a 5M system as set forth in Onshore Order No. 2 and the APD Conditions of Approval. The SH2 wellhead schematic and proposed BOPe configuration is attached for reference. COP also request approval for use of one flex hose on the drilling rig. See Attached BOPe Schematic and Testing Information and hose specifications.

4. The proposed casing program including size, grade, weights, type of thread and coupling, and the setting depth of each string and its condition. For exploratory wells, or for wells as otherwise specified by the authorized officer, the operator shall include the minimum design factors for tensions, burst, and collapse that are incorporated into the casing design. In cases where tapered casing strings are utilized, the operator shall also include and/or setting depths of each portion.

NEW CASING:

Surface: 17 1/2" hole, 13 3/8" 54.5# J-55 STC csg, set @ 850'. Drill out with 12 ¼" bit and perform shoe test to 11.0 ppg MWE. Burst: 2.67/Collapse: 4.92/Tension: 2.57

Inter 1: 12 1/4" hole, 9 5/8" 40# L-80 BTC csg, set @ 4500" Burst: 2.88/Collapse: 2.62/Tension: 4.74

Production Lateral: 8-3/4" hole, 5 ½" 17# P-110 BTC csg set @ 13,675' MD 9322' TVD. Burst 2.17/Collapse 5.32/Tension 2.84

						1						
Casing Sring	Settig Depth	OD"	Wt lb/ft	Grade	Conn	MIY (psi)	Collapse (psi)	Jt Str (Klbs)	MASP	Burst DF	Collapse DF	Axial DF
	TVD											
Surface	850 905	13- 3/8	54.5	J-55	STC	2730	1130	514	1024	2.67	4.92	2.57
Intermdia	ite 4400 4350	9-5/8	40.0	L-80	BTC	5750	3090	947	1995	2.88	2.62	4.74
Productio	on 9235	5-1/2	17.0	P-110	BTC	10640	7840	568	-	2.17	5.32	2.84

The Plan is to set casing and drill in a southern direction to a proposed bottom hole location of 330 FSL 330 FWL Unit letter "M" Section 28, T 26S, 32E

5. The amount and type(s) of cement, including anticipated additives to be used in setting each casing string, shall be described. If stage cementing techniques are to be employed, the setting depth of the stage collars and amount and type of cement, including additives, and preflush amounts to be used in each stage, shall be given. The expected linear fill-up of each cemented string, or each stage when utilizing stage-cementing techniques, shall also be given.

- a. 13-3/8" Csg: lead w/870 sx Class C cement + HalCem-C (Yeild: 1.33 cft) Tail w/230 sx Class C cement + 1 lbm/sk EconoChem-HRLTRRC (Yield 1.85 cft/sk) Circulate to surface. Based on 17-1/2" OH, with 200% excess
- b. 9-5/8" Csg: lead w/1200 sx 50/50 Class C Poz + 2.5 gal/bbl WG-19 + 1 lbm/sk EconoCem-C (Yield: 2.48 cft/sk) Tail w/270 sx 'H' + HalCem C (Yield 1.33 cft/sk) Circulate to surface. Based on 12.25" hole with 150% excess
- c. 5-1/2" Csg lead w/1180 sx HLH+ 0.3% Halad-9 + 5lbs/sk silicalite + 0.3% HR- 800 (Yield: 2.00 cft/sk) Tail w/805 sx 'H' + 0.4% Halad-9 + 0.1% WG-17 + 3.0% KCL + 0.3% HR-800 (Yield 1.2 cft/sk) circulate cement 500' into 9-5/8" casing. Based on 8-3/4" Hole w/150% excess

Mud Program:

0-850,90S	Aquagel/Spudmud Brine Cut Brine	8.9#	Vis 32-36	WL: NC
850-4500'	Brine	10.1#	Vis 28-30	WL: 5-8
4500-13,675'	Cut Brine	10#	Vis 30-40	WL: <=5
4350		V .		

Gas detection equipment and pit level flow monitoring equipment will be on location. ConocoPhillips Company will maintain sufficient mud and weighted material on location at all times.

7. The anticipated testing, logging, and coring procedures to be used, including drill stem testing procedures, equipment, and safety measures.

a. DST Program: None
b. Mud Logging: Two-Man- 2800'- TD' Vertical and Horizontal Logs to be run: GR-MWD 13675'-8600'

8. List the expected bottom-hole pressure and any anticipated abnormal pressures, temperatures or potential hazards that are expected to be encountered, such as lost circulation zones and hydrogen sulfide. The operator's plans for mitigating such hazards shall be discussed. Should the potential to encounter hydrogen sulfide exist, the mitigation procedures shall comply with the provisions of the BLM.

The expected pressure gradient is 0.433 psi/ft or 8.3 ppg equivalent

.The average anticipated bottom hole pressure ranges on average 4360 psi.

- No hydrogen sulfide is expected as to data gathered from the drilling of the Wilder Federal 28 #1H and Buck Federal 17 #1H.

Any other facets of the proposed operation which the operator wishes to be considered in reviewing the application.

Anticipated Spud date of July 23, 2012. Construction of well pad and road will begin as soon as all agency approvals are obtained.

9. Address the proposed directional design, plan view, and vertical section in true vertical and measured depth for directional, horizontal, or coil tubing operations.

The proposed directional/horizontal documents are attached.

4

ConocoPhillips MCBU Permian Hz Bonespring/Avalon Wilder Federal 28 Wilder Federal 28 #4H

Wilder Federal 28 #4H

Plan: Plan BLM

Standard Planning Report

22 November, 2011

ConocoPhillips or its affiliates Planning Report

Company: Project: Site: Well: Wellbore:	EDM Central ConocoPhillip Permian Hz B Wilder Federa Wilder Federa Vilder Federa Plan BLM	es MCBŬ Sonespring/Av al 28 al 28 #4H	valon	Local Co-ordir TVD Reference MD Reference North Reference Survey Calcula	e: Ce:	Do N Do N True	Wilder Federal lot Use @ 3156 lot Use @ 3156 num Curvature	6.0ft (Origin 6.0ft (Origin	
Project Map System:		Hz Bonesprin	g/Avalon xact solution)	System Datu	· ·	Maar	n Sea Level		· · · · · · · · · · · · · · · · · · ·
Geo Datum: Map Zone:	NAD 1927	(NADCON Control 420	ONUS)	System Datu					
Site	Wilder Fe	deral 28	· · · · ·				,	., 1 1	; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;
Site Position:			Northing:		m La	titude:			
From:	None		Easting:			ongitude:			
Position Uncertai	inty:	0.0 ft	Slot Radius:		in Gr	rid Converge	ence:		0.00 °
Well	Wilder Fed	deral 28 #4H	, , , , , , , , , , , , , , , , ,		, , ,	.		· <u> </u>	
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Well Fosition			-		0.00 m				105° 10' 51.259 W
	+E/.M	0.0 fl	Easting				fude:		
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Position Uncertai Wellbore Magnetics	inty Wilder Fe	0.0 ft	Wellhead E	Declination Declination	ft	•	nd Level:	· Field St	3,138.0 ft
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ConocoPhillips or its affiliates

Planning Report

Company: Project: Ste Well Wellbore Design Project Wilder Wilder Wilder Wilder Plan Bl	Federal 28 Federal 28 Federal 28 LM	BŬ pring/Avalon #4H #4H		TVD Refe MD Refer North Re	ordinate Refe rence ence ference acculation Met	rence: W D D Tri Mod: M		eral 28 #4H 156.0ft (Origin 156.0ft (Origin ure	nal Well Elev)
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11/22/2011 3:57:04PM

COMPASS 2003.16 Build 69

ConocoPhillips or its affiliates Planning Report

Database EDM Central Planning Company ConocoPhillips MCBU Project Permian Hz Bonespring/Avalon Site Wilder Federal 28 Well Wilder Federal 28 #4H Wellbore: Wilder Federal 28 #4H Design Plan BLM	Local Colordinate Reference: Well Wilder Federal 28 #4H TVD Reference: Do Not Use @ 3156.0ft (Original Well Elev) Do Not Use @ 3156.0ft (Original Well Elev) Do Not Use @ 3156.0ft (Original Well Elev) True Survey Calculation Method: Minimum Curvature	
Comparison and March 1997 and	1111、《文字》(1111)至11年1月,11日,11日,11日,11日,11日,11日,11日,11日,11日,1	
Planned Survey	lical (Vertical) Dogleg Build	
Depth	The second se	

	Measured Depth / In (ft)	clination	Azimuth	Vertičal Depth (ft)	+N/-S (ft)	+E/-W	Vertical } Section (ft) 0.0 0.0	Dogleg Rate	Build Rate (*/100ft)	Rate (*/100ft)
1	5,400.0	ຊັບທີ່ຊູ້ຊູ້ຊູ້ 0.00	(?) 180.00	5,400.0	ي. (ال) 0.0	0.0	0.0	0.00	0.00	0.00
	5,500.0 5,600.0 5,700.0 5,800.0 5,900.0	0.00 0.00 0.00 0.00 0.00	180.00 180.00 180.00 180.00 180.00	5,500.0 5,600.0 5,700.0 5,800.0 5,900.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
	6,000.0 6,100.0 6,200.0 6,300.0 6,400.0	0.00 0.00 0.00 0.00 0.00	180.00 180.00 180.00 180.00 180.00	6,000.0 6,100.0 6,200.0 6,300.0 6,400.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
	6,500.0 6,600.0 6,700.0 6,800.0 6,900.0	0.00 0.00 0.00 0.00 0.00	180.00 180.00 180.00 180.00 180.00	6,500.0 6,600.0 6,700.0 6,800.0 6,900.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00
	7,000.0 7,100.0 7,200.0 7,300.0 7,400.0	0.00 0.00 0.00 0.00 0.00	180.00 180.00 180.00 180.00 180.00	7,000.0 7,100.0 7,200.0 7,300.0 7,400.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
	7,500.0 7,600.0 7,700.0 7,800.0 7,900.0	0.00 0.00 0.00 0.00 0.00	180.00 180.00 180.00 180.00 180.00	7,500.0 7,600.0 7,700.0 7,800.0 7,900.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
	8,000.0 8,100.0 8,200.0 8,300.0 8,400.0	0.00 0.00 0.00 0.00 0.00	180.00 180.00 180.00 180.00 180.00 180.00	8,000.0 8,100.0 8,200.0 8,300.0 8,400.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
	8,500.0 8,600.0 8,700.0 8,800.0 8,800.0	0.00 0.00 8.01 16 03 24.04	180.00 180.00 180.00 180.00 180.00	8,500.0 8,600.0 8,699.7 8,797.4 8,891.3	0.0 0.0 -7.0 -27.8 -62.0	. 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 7.0 27.8 62.0	0.00 0.00 8.01 8.01 8.01	0.00 0.00 8.01 8.01 8.01	0.00 0.00 0.00 0.00 0.00
	9,000.0 9,100.0 9,200.0 9,300.0 9,400.0	32.06 40.07 48.09 56.10 64.11	180.00 180.00 180.00 180.00 180.00	8,979.5 9,060.2 9,132.0 9,193.4 9,243.2	-109.0 -167.8 -237.4 -316.2 -402.8	0.0 0.0 0.0 0.0 0.0	109.0 167.8 237.4 316.2 402.8	8.01 8.01 8.01 8.01 8.01	8.01 8.01 8.01 8.01 8.01	0.00 0.00 0.00 0.00 0.00
	9,500.0 9,600.0 9,700.0 9,723.0 9,800.0	72.13 80.14 88.16 90.00 90.00	180.00 180.00 180.00 180.00 180.00	9,280.4 9,304.4 9,314.6 9,314.9 9,314.9	-495.5 -592.5 -691.9 -714.9 -791.9	0.0 0.0 0.0 0.0 0.0	495.5 592.5 691.9 714.9 791.9	8.01 8.01 8.01 8.02 0.01	8.01 8.01 8.02 -0.01	0.00 0.00 0.00 0.00 0.00
	9,900.0 10,000.0 10,100.0 10,200.0 10,300.0	89.99 89.99 89.98 89.98 89.98 89.97	180.00 180.00 180.00 180.00 180.00	9,314.9 9,315.0 9,315.0 9,315.0 9,315.1	-891.9 -991.9 -1,091.9 -1,191.9 -1,291.9	0.0 0.0 0.0 0.0 0.0	891.9 991.9 1,091.9 1,191.9 1,291.9	0.01 0.01 0.01 0.01 0.01	-0.01 -0.01 -0.01 -0.01 -0.01	0.00 0.00 0.00 0.00 0.00
	10,400.0 10,500.0	89.97 89.96	180.00 180.00	9,315.1 9,315.2	-1,391.9 -1,491.9	0.0 · 0.0	1,391.9 1,491.9	0.01	-0.01 -0.01	0.00

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COMPASS 2003.16 Build 69

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ConocoPhillips or its affiliates

Planning Report

ISO PROSES	ompany: Conoc roject: Permia ite: Wilder ell: Wilder	Central Planni DPhillips MCl In Hz Bonesg Federal 28 Federal 28 # Federal 28 # LM	BŪ pring/Avalon 4H		TVD Refei MD Refer North Ref	erence: alculation Me	E T thod: } N	Vell Wilder Fed to Not Use @ 3 to Not Use @ 3 frue finimum Curva	3156.0ft (Origin 3156.0ft (Origin ture	nal Well Elev) nal Well Elev)
	(ft))	(°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-₩ (ft)	Vertical Section (ft)	(°/100ft) (Build Rate	Turn Rate (*/100ft) 0.00
	10,600.0 10,700.0 10,800.0	89.96 89.95 89.95	180.00 180.00 180.00	9,315.3 9,315.3 9,315.4	-1,591.9 -1,691.9 -1,791.9	0.0 0.0 0.0	1,591.9 1,691.9 1,791.9	0.01 0.01 0.01	-0.01 -0.01 -0.01	0.00 0.00 0.00
	10,900.0 11,000.0 11,100.0 11,200.0 11,200.0 11,300.0	89.94 89.94 89.93 89.93 89.93	180.00 180.00 180.00 180.00 180.00 180.00	9,315.5 9,315.6 9,315.8 9,315.9 9,316.0	-1,891.9 -1,991.9 -2,091.9 -2,191.9 -2,291.9	0.0 0.0 0.0 0.0 0.0	1,891.9 1,991.9 2,091.9 2,191.9 2,291.9	0.01 0.01 0.01 0.01 0.01 0.01	-0.01 -0.01 -0.01 -0.01 -0.01	0.00 0.00 0.00 0.00 0.00
	11,400.0 11,500.0 11,600.0 11,700.0 11,800.0	89.92 89.91 89.91 89.90 89.89	180.00 180.00 180.00 180.00 180.00	9,316.2 9,316.3 9,316.5 9,316.7 9,316.8	-2,391.9 -2,491.9 -2,591.9 -2,691.9 -2,791.9	0.0 0.0 0.0 0.0 0.0	2,391.9 2,491.9 2,591.9 2,691.9 2,791.9	0.01 0.01 0.01 0.01 0.01	-0.01 -0.01 -0.01 -0.01 -0.01	0.00 0.00 0.00 0.00 0.00 0.00
	11,900.0 12,000.0 12,100.0 12,200.0 12,300.0	89.89 89.88 89.88 89.87 89.87	180.00 180.00 180.00 180.00 180.00	9,317.0 9,317.2 9,317.4 9,317.6 9,317.9	-2,891.9 -2,991.9 -3,091.9 -3,191.9 -3,291.9	0.0 0.0 0.0 0.0 0.0	2,891.9 2,991.9 3,091.9 3,191.9 3,291.9	0.01 0.01 0.01 0.01 0.01	-0.01 -0.01 -0.01 -0.01 -0.01	0.00 0.00 0.00 0.00 0.00 0.00

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ASE	IND ELEV.	FWL 330 330 330 RKB 13675- 8,600' 33, Svy every 500' 38, svy every 500' 38, svy every 500' 50' Sx, svy every 50' 50' System 50'	Sounty, NM 3,160' (est) 3183' Interval	
COUNTY ASE FSL FSL GROUND GROU	rEL FEL 3 3 VD ELEV. D D 3* max 3* max 3* max	FWL 330 330 330 RKB 13675- 8,600' 33, Svy every 500' 38, svy every 500' 38, svy every 500' 50' Sx, svy every 50' 50' System 50'	3,150' (est) 3183' <u>Interval</u>	d Horizontal sections
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GROUNE OGS: Open Hole GR-MWD EVIATION: Int1/2 Prod ST'S: No core. MPLES: Mudlogging Two-Man	VD ELEV. <u>Type</u> ole: D 3* max 3* max	330 RKB 13675- 8,600' 3x, svy every 500' 3x, svy every 90' End TD	3183' Interval	d Horizontal sections
GROUNE OGS: Open Hole GR-MWD EVIATION: Int1/2 Prod ST'S: No core. MPLES: Mudlogging Two-Man	IVD ELEV.	RKB 13675- 6,600 	3183' Interval	d Horizontal sections
Open Hole GR-MWD EVIATION: Init/2 Prod ST'S: No core. MPLES: Mudlogging Two-Man	ng Start 2,800'	13675- 8,600' 3x, svy every 500' 3x, svy every 90' 5x, svy every 90'		d Horizontal sections
Open Hole GR-MWD EVIATION: Init/2 Prod ST'S: No core. MPLES: Mudlogging Two-Man	ng Start 2,800'	ах, svy every 500' ах, svy every 90' End TD		d Horizontal sections
EVIATION: Surf: In1/2 Prod ST'S: No core. MPLES: Mudloggmg Two-Man	3* max 3* max Ing Start n 2,800'	ах, svy every 500' ах, svy every 90' End TD	Vertical and	d Horizontal sections
Surf: Int1/2 Prod	3* max	ix, svy every 90' End ' TD	Vertical and	d Horizontal sections
Surf: Int1/2 Prod	3* max	ix, svy every 90' End ' TD	Vertical and	d Horizontal sections
In11/2 Prod STS: No core. MPLES: Mudlogging Two-Man DP. Nabors Rig	3* max	ix, svy every 90' End ' TD	Vertical and	d Horizontal sections
Prod STS: No core. MPLES: Mudlogging Two-Man PP. Nabors Rig	ing Start n 2,800'	End ' TO	Vertucal and	d Horizontal sections
DRES: No core. MPLES: Mudlogging Two-Man DP. Nabors Rig	ing Slart n 2,800'	то	Vertical and	d Horizontal sections
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MPLES: Mudloggin Two-Man)P. Nabors Rig	ing Slart n 2,800'	то	Vertical and	a Honzontal sections
Mudlogging Two-Man DP. Nabors Rig	n 2,800'	то	Vertical and	1 Horizontal sections
(With Rotat	tig meog BOFE.	Calegory 3 Well C	-5Mpsi Annular (ents Hydni GK)
an used	along Head) SM S	13-5/8"	-5M psi Pipe Ran	n (Cameron U)
SM have	55	13-5/8"	-5Mpsi Spacer S	pool
rface Formation:	···-			
lax. MW Vis	/is	WL		Remarks
8 9 32-3	-36			
101 28-3	-30	5-8	5	
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<u>Ceme</u> To Suri		<u>WO</u> 18hi		<u>Remarks</u>
To Sur		<u>18h</u>		
500' Into int	intermediate	18hi	'S	Long String
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			onal Company	8 0 '/100'
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		1	180 0 Vertica	1800 Vertical Build Rate. 1800 Tan Leg Turn Rate 1800 1800

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Geologist

Luis Serrano Drilling Engineer

Bonespring/Red Hills BURLINGTON RESOURCES Wilder Federal 28 #4H

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Surface Casing:	
Surface Casing Depth (Ft)	-8
Surface Casing O.D. (In.)	13.
Surface Casing ID (In)	12.
Hole O.D. (In)	1
Excess (%)	20
Volume Tail (Sx)	
Yield Tail (Cu. Ft./Sx)	1
Yield Lead (Cu. Ft./Sx)	1
Shoe Joint (Ft)	
Shoe Volume (Cu. Ft)	3
Tail feet of cement	3
Calculated Total Volume (Cu. Ft.)	1,
Calc. Tail Volume (Cu. Ft.)	
Calc. Lead Volume (Cu. Ft.)	1,
Calc. Lead Volume (Sx)	
	-

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	Intermediate1 Casing (Lead):		Intermediate1 Casing (Tail):			
-850	Intermediate Casing O.D. (In.)	9.625	Intermediate Casing O.D. (In.)	9-5/8"		
3.375	Intermediate Casing ID (In)	8.835	Production Casing ID (In)	8.835		
2.715	Hole O.D (In)	12.25	Hole O.D. (In)	12,25		
17.5	Excess (%)	150%	Excess (%)	150%		
200%	cap 12-1/4 - 9-5/8"	0.0558	cap 12-1/4 - 9-5/8"	0.0558		
230	Calculated fill:	3,800'	Calculated fill:	700'		
1.85			Yield Tail (Cu. Ft./Sx)	1.33		
1,33	Yield Lead (Cu. Ft./Sx)	2.48	Shoe Joint (Ft)	40		
40	ζ, , , , , , , , , , , , , , , , , , ,		Shoe Volume (Cu. Ft)	17.0		
35.3	Calculated Total Lead (Cu. Ft.)	2,975	х, <i>У</i>			
300		• •	Calc. Tail Volume (Cu. Ft.)	346		
1,598	Calc. Lead Volume (Sx)	1200	· · · ·			5480
417			Required Tail Volume (Sx)	270		
1,146						
870						
	Production Casing (Lead):		Production Casing (Tail):			
	Intermediate Casing O.D. (In.)	5.500	Intermediate Casing O.D. (In.)	5.500		
	Intermediate Casing ID (In)	4.892	Intermediate Casing ID (In)	4.982		
	Hole O.D. (In)	8.75	Hole O.D. (In)	8.75		
	Excess (%)	150%	Excess (%)	150%		
	cap 5-1/2" - 8-3/4" bls/ft	0.0450	cap 5-1/2" - 8-3/4" bis/ft	0.0450		
	cap 5-1/2 - 9-5/8" bls/ft	0.0408	cap 7 - 9-5/8" bls/ft			
	Calculated fill: (500' into 9-5/8")	6,200'	Calculated fill:	2,550'	8,675'	
	Yield Lead (Cu. Ft./Sx)	2.0	Yield Lead (Cu. Ft./Sx)	1.2		
	Calculated Total Lead (Cu. Ft.)	2,349	Calculated Total Tail (Cu. Ft.)	966		
	Calc. Lead Volume (Sx)	1180	Desuised Tail Values (Sv)	205		
			Required Tail Volume (Sx)	805		

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Item

- 1 Rotating Head (13-5/8", 3M)
- 2A Fill up Line and Valve

Description

- 2B Flow Line (8")
- 2C Shale Shakers and Solids Settling Tank
- 2D Cuttings Bins for Zero Discharge
- 2E Rental Mud Gas Separator with vent line to flare and return line to mud system
- 3 Annular BOP (13-5/8", 5M)
- 4 Double Ram BOP (13-5/8", 5M with Blind Rams in Upper Set and Pipe Rams in Lower Set)
- 5 Kill Line (2" chicksan, 5000 psi WP)
- 6 Kill Line Valve, Inner (2", 5000 psi WP)
- 7 Kill Line Check Valve (2", 5000 psi WP
- 8 Choke Line (4" Flexible Steel Line, 5000 psi WP)
- 9 Choke Line Valve, Inner (4", 5000 psi WP)
- 10 Choke Line Valve, Outer, (Hydraulically operated, 4", 5000 psi WP
- 11 Spacer Spool (13-5/8" 5M)
- 12 Spacer Spool (13-5/8" 5M)
- 13 Casing Head (13-5/8" 5M)
- 14 Ball Valve and Threaded Nipple on Casing Head Outlet, 2" 5M
- 15 Surface Casing

Drawn by: Steven O Moore, Chief Drilling Engineer, Mid-Continent Business Unit, ConocoPhillips Company, 22-Dec-2011



- Item Description
 - 1 Manual Adjustable Choke, 3-1/16, 10M
 - 2 Manual Adjustable Choke, 3-1/16, 10M
 - 3 Gate Valve, 2-1/16 10M
 - 4 Gate Valve, 3-1/16 10M
 - 5 Gate Valve, 3-1/16 10M
 - 6 Gate Valve, 3-1/16 10M
 - 7 Gate Valve, 4-1/16" 10M
 - 8 Gate Valve, 3-1/16 10M
 - 9 Gate Valve, 3-1/16 10M
 - 10 Gate Valve, 4-1/16" 10M
 - 11 Gate Valve, 3-1/16 5M
 - 12 Gate Valve, 3-1/16 10M
 - 13 Gate Valve, 3-1/16 10M
 - 14 Pressure Gauge
 - 15 2" hammer union tie-in point for BOP Tester

Drawn by: Steven O. Moore Chief Drilling Engineer, Mid-Continent Business Unit, ConocoPhillips Company 22-Dec-2011



Stage 2 — Install Split Speed Head With Riser Assembly

- 1. Drill and condition hole for surface casing.
- Cut the conductor pipe off at the correct height above the cellar floor and grind stub level.

Note: The SH2Riser Assembly is pre-assembled and tested prior to being shipped to location. The assembly is made up of a full length landing joint with flange, upper and lower SH2 housings, and a 10' long pup joint.

- Examine the 13-5/8" 5M∞ 13-3/8" SOW SH2 Speed Head/Riser Assembly (Items A1 & B1). Verify the following:
 - 10 pupjoint's properly welded in place and casing threads are clean and in good condition
 - all outlet equipment has been removed including all studs and nuts, and valves
 - VR plugs are in place and tight
 base plate is intact and properly welded
 - to the casing head • isolation bushing is in place and prop-
 - erly retained with landing flange landing flange with landing joint are in

place and connection is properly made up

Note: Lockscrews are removed to clear 27-1/2" rotary.

- 4. Run the surface casing to the required depth and then set the last joint of casing run in the floor slips.
- Pick up the SH2 Riser Assembly and make up the assembly in the casing string, tightening the thread connection to the thread manufacturers optimum make up torque.
- 6. Pick up the casing string and remove the floor slips and rotary bushings.
- Slowly and carefully lower the assembly through the rotary table until the baseplate contacts the conductor pipe stub. Slack off all weight.
- 9. Remove the duct tape from the O.D. of both the upper and lower flanges of the assembly
 - and lightly grease all threaded lockscrew holes.

 Locate the (six) 1-1/4" and the (twelve) 1-1/2" lockscrew assemblies.



- Install the 1-1/4" integral lockscrew assemblies in the upper flange and the 1-1/4" assemblies in the lower flange as indicated. (Ref. Dwg. RP111709)
- 12. Rigup the cement head and cement the surface casing string as per program, taking returns through the circulation ports in the baseplate.
- 13. After the cement job is completed, bleed off and remove the cement head.
- 14. Remove the landing flange with landing joint and set aside.

RP-1904 Page 6 ConocoPhillips 13-3/8" x 9-5/8" x 5-1/2" x 2-7/8" 10/3M SH2/SH2-RWellhead System

Wood Group Pressure Control

COPPER STATE RUBBER VISUAL INSPECTION / HYDROSTATIC TEST REPORT CHOKE & KILL HOSE 10,000 P.S.I. W/P X 15,000 P.S.I. T/P SPEC: 090-1915 HS H2S SUITABLE

SHOP ORDER NO.: 16528	SIZE: <u>3"</u> I.D.
SERIAL NO.: 22269	LENGTH <u>25</u> FT. IN.
CONNECTIONS:4-	1/16" 10,000 PSI API FLANGE
VISUAL INS	SPECTION
 (A) END CAPS / SLEEVE RECESS: (B) EXTERIOR / COVER / BRANDING: (C) INTERIOR TUBE: 	<u>ОК</u> ОК ОК
HYDROSTA	ATIC TEST
5 MIN. @ 10,000 PSI	
2 MIN. @ 0 PSI2	5' 3"OAL
3 MIN. @ 15,000 PSI	
WITNESSED BY:	;
FORM QA-21- REV-2 3-22-00	



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August 09 2011

Tenaris Hydril

Size: 4.500 in. Grade: API T95

Wall: 0.430 in. Weight: 18.900 lbs/ft Connection: Blue™

		PIPE BODY	' data		
		GEOMET	IRY .		•
Nominal OD	4.500 in.	Nominal Weight	18.90 lbs/ft	Standard Drift Diameter	3.515 in.
Nominal ID .	3.640 in.	Wall Thickness	0.430 in.	Special Drift Diameter	N/A
Plain End Weight	18.71 lbs/ft	-		-	
· · · · · · · · · · · · · · · · · · ·		PERFORM	ANCE		•
Body Yield . Strength	522 x 1000 lbs	Internal Yield	15890 psi	Collapse	16410 psi
		BLUE™ CONNEC	TION DATA		
		GEOMET			
Regular OD	5.189 in.	Special Clearance OD	5.051 in.	Connection ID	3.740 in.
Critical Section Area	5.768 sq. in.	Critical Section Area (Special Clearance)	4 .659 sq. in.	Make-Up Loss	4.012 in.
Threads per in.	5.00	Coupling Length	9.213 in.		
		PERFORM	ANCE	• 	
Regular OD Tension Efficiency	100 %	Joint Yield Strength	522 x 1000 lbs	Internal Yield	15890 psi
Compression Efficiency	100 [°]	Compression Rating	522 x 1000 lbs	Collapse	16410 psi
Special Clearance Tension Efficiency	85.0 %	Bending	97 °/ 100 ft		
		Make-up to	RQUES		
Minimum	8630 ft-lbs	Target	9590 ft-lbs	Maximum	10550 ft-lbs
Yield Torque	15750 ft-lbs				
	•	BLANKING DIM	ENSIONS		
	•	BLANKING DIM Blanking Dim			·

Λ	109 CHOKE H	NCE CDEC			A	
U N					у	
HOSE MANUFACTURER	HOSE MANUFACTURED DATE	HOSE SERIAL #	HOSE OD	HOSE ID	WORKING PSI	TEST PSI
COPPER STATE RUBBER	2/2007 USA	22269	6.25	3	10K	15K
FLANGE	FLANGE MANUFACTERED DATE	RING TYPE				
4 1/16 10M	11/8/2006	BX153			<u>↓,</u>	

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ConocoPhillips Company Closed Loop System Design, Operating and Maintenance, and Closure Plan

Well: Wilder Federal 28 #4H

Date: December 5, 2011

ConocoPhillips proposes the following plan for design, operating and maintenance, and closure of our proposed closed loop system for the above named well:

1. We propose to use a closed loop system with steel pits, haul-off bins, and frac tanks for containing all cuttings, solids, mud, water, brine, and liquids. We will not dig a pit, nor will we use a drying pad, nor will we dispose of or bury any waste on location.

All drilling waste and all drilling fluids (fresh water, brine, mud, cuttings, drill solids, cement returns, and any other liquid or solid that may be involved) will be contained on location in the rig's steel pits or in hauloff bins or in frac tanks as needed. The intent is as follows:

- We propose to use the rigs's steel pits for containing and maintaining the drilling fluids.
- We propose to remove cuttings and drilled solids from the mud by using solids control equipment and to contain such cuttings and drilled solids on location in haul-off bins.
- We propose that any excess water that may need to be stored on location will be stored in a fresh water pond.

The closed loop system components will be inspected daily by each tour and any needed repairs will be made immediately. Any leak in the system will be repaired immediately, and any spilled liquids and / or solids will be cleaned immediately, and the area where any such spill occurred will be remediated immediately.

2. Cuttings and solids will be removed from location in haul-off bins by an authorized contractor and disposed of at an authorized facility. For this well, we propose the following disposal facility:

Controlled Recovery Inc, 4507 West Carlsbad Hwy, Hobbs, NM 88240, P.O. Box 388 Hobbs, New Mexico 88241 Toll Free Phone: 877.505.4274, Local Phone Number: 432-638-4076

The physical address for the plant where the disposal facility is located is Highway 62/180 at mile marker 66 (33 miles East of Hobbs, NM and 32 miles West of Carlsbad, NM).

The Permit Number for CRI is R9166

A photograph showing the type of haul-off bins that will be used is attached.

- 3. Mud will be transported by vacuum truck and disposed of at Controlled Recovery Inc at the facility described above.
- 4. Fresh Water and Brine will be hauled off by vacuum truck and disposed of at an authorized salt water disposal well. We propose the following for disposal of fresh water and brine as needed:
 - Nabors Well Services Company, 3221 NW County Rd, Hobbs, NM 88240, PO 5208 Hobbs, NM, 88241, Permit SWD 092. (Well Location: Section 3, T19S R37E)
 - Basic Energy Services, PO Box 1869 Eunice, NM 88231 Phone Number 575 394 2545, Facility located at Hwy 18, Mile Marker 19, Eunice, NM.

Luis Serrano Drilling Engineer

ConocoPhillips Company, 600 North Dairy Ashford, Room #2WL-13016, Houston, TX 77079-1175 Office: 832-486-2346

SPECIFIC/ATIONS

SPECIFIC/ANTICINC PLOOP I Mile PLone piece CROSS MEMBER: 332 4 I channel IC on Constitu-WALSS, ST6: PL solid, welded with tubing to Tisl deline incoks DOOR, ST6: PL solid, welded with tubing to Tisl deline incoks DOOR, ST6: PL solid, welded with tubing to Tisl deline incoks DOOR, ST6: PL solid, welded with tubing to Tisl deline incoks DOOR, ST6: PL solid, welded with tubing to Tisl deline incoks DOOR, ST6: PL solid, welded with tubing to Tisl deline incoks DOOR, ST6: PL solid, welded with rease HONT: OLIO PL solid content at che and solid chans, vertical second tatch CRSKETS: Exit ded tubber seal with metal tators WEBDS: All welds continuous except sub-sucure coostnembers FINSH: Coased inside and out with director mean assimulating actylic ename booler coalt th DRO TESTING: Full capacity static test DI IENSIONS: 22: 11 long (21:S triside). 99 wills (08 inside) see crawing for neight ORIGINS: Steel gitt blast and Special paint Amplifielt Hell and Dino pickup. ROOR: ST6: PErcoir banels with tubing and and is import traine. BDS: 21: 68 x 90 metal folling ficts spling caces entraising POLIERS in Consolerations ORIGING: (2): 60 x 62 coentings ORIG (2): 60 x 62 coentings

LATCHV2) independent ratchest binders with chains

roen lid CASKETS: Eximided rubber Seal With metal retainers





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 $\gamma_{i}(1) = c$



4= 157,500 F (3,6 Acres) Э